

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF KENTUCKY-AMERICAN WATER )	
COMPANY FOR A CERTIFICATE OF PUBLIC )	
CONVENIENCE AND NECESSITY AUTHORIZING )	CASE NO. 94-292
THE CONSTRUCTION OF THREE (3) MILLION )	
GALLON GROUND STORAGE TANK AND PUMP )	
STATION, AND 2,700 FEET OF 30-INCH MAIN )	

O R D E R

IT IS ORDERED that Kentucky-American Water Company ("Kentucky-American") shall file an original and 10 copies (two copies of engineering-related materials) of the following information with the Commission, with a copy to all parties of record within 21 days from the date of this Order. Kentucky-American shall furnish with each response the name of the witness who will be available at the public hearing, if one is held, for responding to questions concerning each item of information requested.

1. Provide hydraulic analyses, supported by computations and actual field measurements, of typical operational sequences of the existing water distribution system as presently configured and operated. These hydraulic analyses should demonstrate the operation of all pump stations and the "empty-fill" cycle of all water storage tanks. Computations are to be documented by a labeled schematic map of the system that shows pipeline sizes, lengths, connections, pumps, water storage tanks, wells, and sea level elevations of key points, as well as allocations of actual customer demands. State whether flows used in the analyses are

based on average instantaneous flows, peak instantaneous flows, or any combination or variation thereof. The flows used in the analyses shall be documented by actual field measurements and customer use records. Justify fully any assumptions used in the analyses. (Note - if the proposed construction is in an area of the water distribution system which can be hydraulically isolated or separated from the rest of the water system, only hydraulic analyses for the isolated portion of the system in question need be filed.)

2. Provide a summary of any operational deficiencies of the existing water system that are indicated by the hydraulic analyses or that are known from experience.

3. In order to obtain realistic results when utilizing hydraulic analyses to predict a water distribution system's performance, engineering references stress the importance of calibrating the results predicted to actual hydraulic conditions. This calibration process should include matching field measurements to the results predicted by the computer over a wide range of actual operating conditions. At a minimum this should include average and maximum water consumption periods, as well as "fire flow" situations and very high demand periods.

Based on the above, explain the procedures used to verify the hydraulic analyses filed in this case. This explanation should be documented by field measurements, hydraulic calculations, etc.

4. Provide hydraulic analyses, supported by computations and actual field measurements, of typical operational sequences of the

water distribution system with the improvements proposed in this case in place. These hydraulic analyses should demonstrate the operation of all pump stations and the "empty-fill" cycle of all water storage tanks. Computations are to be documented by a labeled schematic map of the system that shows pipeline sizes, lengths, connections, pumps, water storage tanks, wells, and sea level elevations of key points, as well as allocations of actual customer demands. Flows used in the analyses shall be identified as to whether they are based on average instantaneous flows, peak instantaneous flows, or any combination or variation thereof. The flows used in the analyses shall be documented by actual field measurements and customer use records. Justify fully any assumptions used in the analyses. (Note - these analyses should use the same schematic as the analyses of the existing water distribution system to facilitate comparison.)

5. Provide a copy of the final summation of the total cost of construction and funding arrangements referred to as the Final Engineering Report.

6. Kentucky-American has proposed the construction of a three million gallon ground storage tank and pump station on Clays Mill Road. Paragraph 5 of the application mentions a 30-inch water main to be installed along Clays Mill Road. The application also mentions 2,700 lineal feet of 30-inch water main to be installed. Provide details on any water mains to be installed as part of this construction project and where they are depicted in the construction documents.

7. Paragraph 9 of Kentucky-American's application mentions the proposed tank and pump station construction being designated in the 1992 Least Cost Comprehensive Planning Study ("LC/PS") as project A-12. The description of this project (A-12) in the LC/PS states that project A-15 which consists of 17,000 feet of 20-inch main must be installed concurrently with this storage project. However, no mention of this 20-inch main is made in the current case. Please clarify this situation. If this construction is to be included in the present case, provide the appropriate construction documents.

Done at Frankfort, Kentucky, this 23rd day of September, 1994.

PUBLIC SERVICE COMMISSION

  
For the Commission

ATTEST:

  
Executive Director